

**Minimum Technical Requirements for a Real Time Spectrum Analyzer**  
**July 21, 2014**

The following is a list of technical specifications required for minimum operation of the requested Real Time Spectrum Analyzer:

1. Frequency Range: 1Hz-26.5GHz
2. Real Time Bandwidth: >100MHz
3. Resolution Bandwidth Range: 1Hz-10MHz
4. Video Bandwidth Range: 1Hz-5MHz
5. Spectrum Acquisitions: > 100,000/sec
6. Amplitude Accuracy: +/-1dB from 10MHz-6GHz, +/-2dB from 6GHz-26.5GHz
7. Displayed Average Noise: -140dBm/Hz or better from 10MHz-26.5GHz
8. Maximum Input Power: 30dBm
9. Input Attenuator: 0-50dB in 5 dB steps
10. Analyzer shall include Integrated Preamplifier (1MHz-26.5GHz)
11. Analyzer shall be capable of performing the following time domain measurements:  
Frequency vs. Time, Phase vs. Time, Power vs. Time
12. Analyzer shall include a user definable frequency mask trigger
13. Analyzer shall include digital I and Q output
14. Analyzer shall be capable of acquiring and recording signals
15. Analyzer shall include phase noise and jitter measurement features
16. Analyzer shall include setting time measurement features
17. Analyzer shall include pulse measurement features
18. Analyzer shall include analog modulation analysis (AM/FM/PM)
19. Analyzer shall include digital modulation analysis (BPSK,QPSK,8PSK,MSK,QAM,FSK)
20. Analyzer shall include OFDM analysis
21. Analyzer shall include trigger inputs and outputs
22. Analyzer shall include removable 120GB or larger solid state hard drive

The above minimum technical requirements for this Real Time Spectrum Analyzer shall be fulfilled in order to performed measurements on the devices currently under development in Code 6364.